

Notice of Allowability

Application No.

10/774,053

Examiner

Ivan H. Carpio

Applicant(s)

STEINFELD ET AL.

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/18/06.
2. ☒ The allowed claim(s) is/are 1-24 and 32-37.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

The application has been amended as follows: Claims amended as follows-

Claim 1 [Currently Amendment]: An electrical mounting board comprising:
a substrate having a plurality layers configured such that a substrate core lies
between the layers;

a first layer having formed thereon a plurality of bi-directionally oriented electrical ground traces arranged in a hybrid configuration so that a first group of electrical ground traces is arranged in a transverse relationship with a second group of electrical ground traces and wherein the first layer includes longitudinal spaces between the ground traces enabling signal traces to be formed thereon;

a second layer having formed thereon a plurality of bi-directionally oriented electrical ground traces arranged in a hybrid configuration so that a third group of electrical ground traces is arranged in a transverse relationship with a fourth group of electrical ground traces and wherein the second layer includes longitudinal spaces between the ground traces enabling signal traces to be formed thereon;

a set of electrically conductive interconnects that pass through the substrate core to electrically connect electrical ground traces of the first layer with electrical ground traces of the second layer to form a multi-layer ground grid having a plurality of ringlets;
and

~~at least one of electrical contacts and~~ signal traces formed on the longitudinal spaces between the electrical ground traces of at least one of the first and second layers.

Claim 5 [Currently Amendment]: The board of Claim 1 wherein electronic components are mounted on the board and electrically connected with the ~~at least one of electrical contacts and~~ signal traces.

Allowable Subject Matter

Claims 1-24 and 32-37 are allowed.

The following is an examiner's statement of reasons for allowance: With respect to independent claims 1, 10 and 35, Tanahashi (6184477) teaches a substrate with a plurality of layers and bi-directionally oriented ground traces but there is simply no evidence in the prior art teaching signal traces being formed on spaces between ground traces on the same substrate layer as in the claimed combinations. Furthermore there is no evidence in the prior art making this modification obvious. With respect to claim 19 there is simply no evidence in the prior art teaching or making obvious having electrical ground traces of two layers forming ringlets configured in substantially triangular arrangements as in the claimed combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

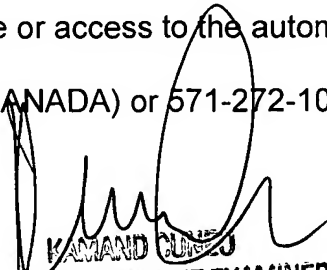
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ivan H. Carpio whose telephone number is 571-272-8396. The examiner can normally be reached on M-R 6:00am - 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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